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CENTRAL INTELLIGENCE AGENCY SECURITY INFORMATION

INFORMATION REPORT

REPORT NO. [redacted]

CD NO.

USSR

COUNTRY ~~USSR~~ Ukrainian SSR

DATE DISTR. 5 Mar 1952

SUBJECT Zaporozhstal Iron and Steelworks in Zaporozhe

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DATE OF INFO. [redacted]

SUPPLEMENT TO REPORT NO. 25X1

[redacted]

1. The plant was located northeast of Zaporozhe (47°49' N, 35°11' E) on the eastern bank of the Dnieper River. The plant comprised a blast-furnace department, a coking plant, an open-hearth department, a Thomas steel department, a special steel department, a ferro alloy department, a rolling mill department, and secondary and auxiliary departments. *

2. The existence of four blast furnaces was confirmed. Three blast furnaces were in operation in 1949. The fourth one was being reconstructed and may have resumed operation early in 1950. Most sources agreed that the capacity of all the blast furnaces totaled 3,700 tons; i. e. blast furnace No 1 and No 2 - 700 tons each, blast furnace No 3 - 1,300 tons and blast furnace No 4 - 1,000 tons. Allegedly only 60 percent of the capacity was utilized due to mechanical difficulties with the blast engine, etc. The existence of an old and a new pig foundry at the blast furnace department was also confirmed. Most of the pig iron castings were shipped out. These castings represented about 20 percent of the pig iron production. Eighty percent of the molten pig iron went to the steelworks for further processing. The restricted processing capacity of the steelworks was possibly another reason why the blast-furnace capacity was not fully utilized. There was also a forge and a pressing works in the blast-furnace department near the foundries.

3. There were four batteries in the coking plant. Three were in operation in mid-1949 and the fourth was under construction. The batteries were placed in a row with two on each side of the coke and coal bunker. The number of chambers was reported to be 70 to 90 for each battery.

4. A number of sources agreed that 10 open-hearth furnaces were completed and in operation late in 1949 while another two furnaces were still being reconstructed. Therefore twelve furnaces may be in operation by the end of 1950. The furnaces were set up in two groups of six furnaces each. North of the open-hearth department was the preparation shop where the charges were mixed. South of the open-hearth department was the mold shop where ingots were cast in molds. The molds were removed by cranes from the hardened, but still glowing, ingots. Between the blast-furnace department and the open-hearth steel department was a mixing shop where molten pig iron, to be

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5. The construction and installation of a Bessemer plant opposite the boiler house was reported in early 1949. However, it cannot be determined from the contradictory information whether such a plant was actually being constructed or whether sources confused the construction of this plant with the construction of the special steel department.

6. The special steel department was also called "the 30-ton department" which designation may be derived from the furnace capacity. The number of furnaces was not accurately determined. There were at least two furnaces. Some sources reported four or five furnaces, four of which were of 30 tons and one of 10 tons capacity. The furnaces were Siemens electric furnaces. One source reported that a new special-steel department was being built south of the plant, outside the plant walls. Another source mentioned new construction projects, whose purpose was unknown, on the same site. A plant for the production of tools may be located near the special-steel works. **

7. Two of the five original electric furnaces in the ferro-alloy department had resumed operation by the end of 1949. It was allegedly planned to expand this department to include eight furnaces. No production figures were known. Ferro-manganese, ferro-silicon, and ferro-tungsten were produced. Some sources also reported a carbide plant in addition to the ferro-alloy plant.

8. Before the war the rolling mill of this plant supplied 50 percent of all the sheet metal for automobile bodies in the U.S.S.R. It also was the only producer of automobile sheet metal by the cold-rolling process. The rolling mill department comprised [redacted] ILLEGIB was a cold [redacted] mill had [redacted] plates up to 250 mm thick, a roll train for sheets between 1 and 15 mm, shears, a sheet-winding machine, etc. The rolling mill was electrically operated. The engines were housed in an annex at the side of the building. The cold-rolling mill received about half of the production of the hot-rolling department. It produced sheets of thickness as low as 0.5 mm. Both departments were connected by an underground conveyor belt. Some sources reported the construction of a new rolling mill at the southeastern border of the plant area. This mill was scheduled to be completed by the end of 1950. The building work observed at the end of 1949 indicated that the length of the proposed installation was 800 meters. It was observed that rolling-mill machinery were stored in the open near the construction site.

9. The secondary and auxiliary departments comprised machine shops, a forge, a foundry, and a drafting office. These departments were combined into a plant section called Remontny Mekhanicheski Zavod and were used for maintenance of the installations of the main plant. The plant also contained a locomotive repair shop, an electrical repair shop, a slag-stone factory, a fireclay factory, and a cement factory.

10. A small percentage of the electric power was supplied by the plant-owned TEC station, which had a boiler house with four vertical-tube boilers of 14 atmospheres. Blast-furnace gas and coal dust were used as fuel. The coal-dust firing was operated with nozzles similar to those used in oil-firing systems. The steam-boiler were used with steam turbo generators for the generation of power, and with turbo compressors for the generation of air blast. The greater part of the electric power was supplied by the large Zaporozhe Power Plant through a plant-owned transformer station. The incoming current was 100,000 volts and was reduced to 6,000 volts.

11. The estimated hot-rolled products were 750 tons daily while 600 tons of cold-rolled products were manufactured daily. The daily scrap requirements for steel production were 700 tons, 640 tons of which were supplied by the scrap output of the plant itself.

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12. The number of employees was reported to be between 7,000 and 7,500. There was a great shortage of skilled workmen.

25X1 * [redacted] Comment. For location and layout sketches, see Annexes 1 and 2. The ferro alloys were presumably smelted in the special-steel department. This would mean that the ferro-alloy department and the special-steel department are identical. This is also corroborated by the number of furnaces indicated for the two departments as well as the fact that there is a special-steel department identified on the sketch but no ferro-alloy department.

25X1 ** [redacted] Comment. An increase in the amount of special steel produced appears probable considering the reputation and significance of the Zaporozhe Plant as one of the leading plants for the production of special steel.

2 Annexes: 2. ~~Partial sketch, with remarks.~~

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CONTROL U. S. OFFICIALS Annex 1 to

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Zaporozhstal Iron and Steelworks in Zaporozhe

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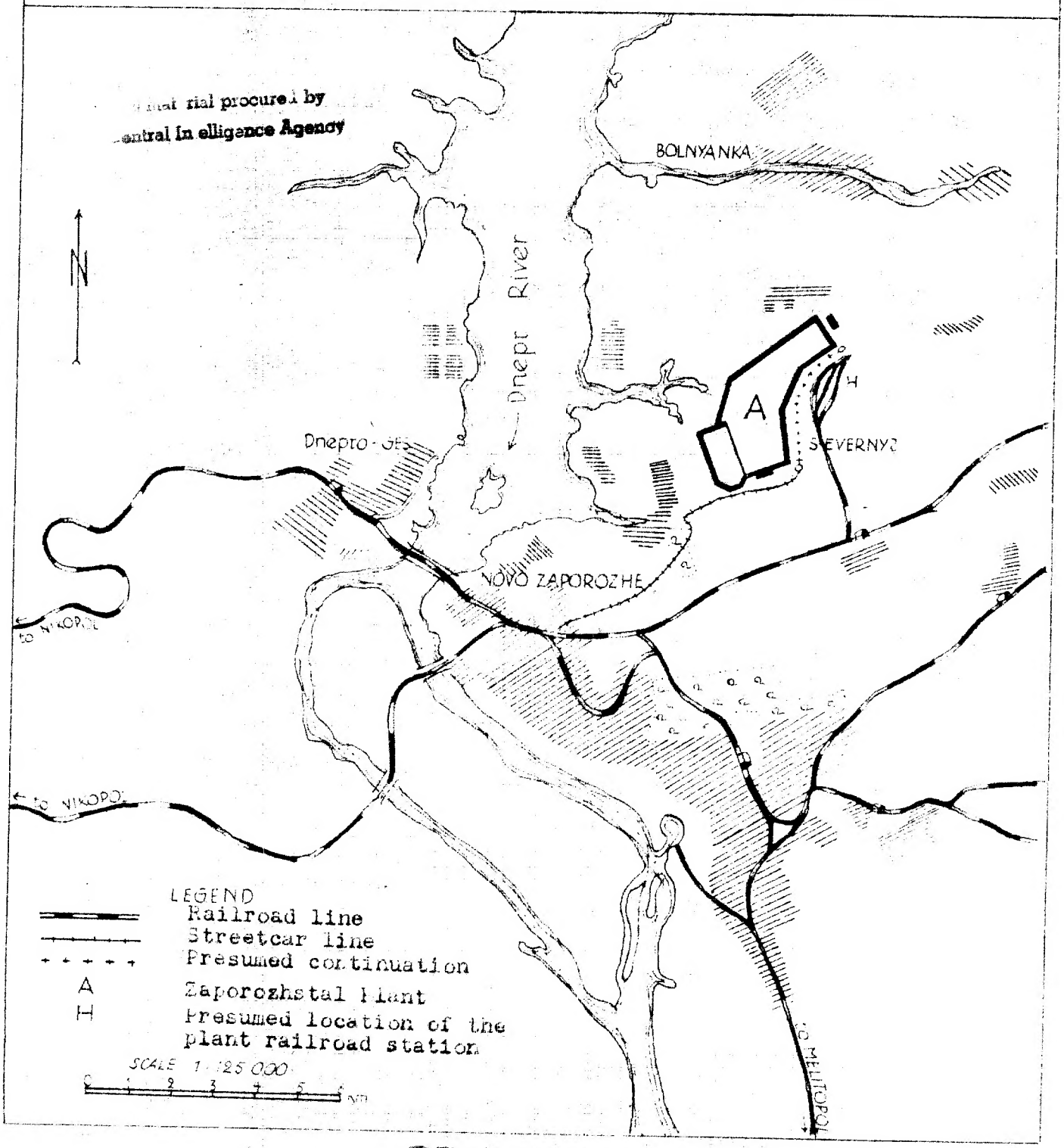

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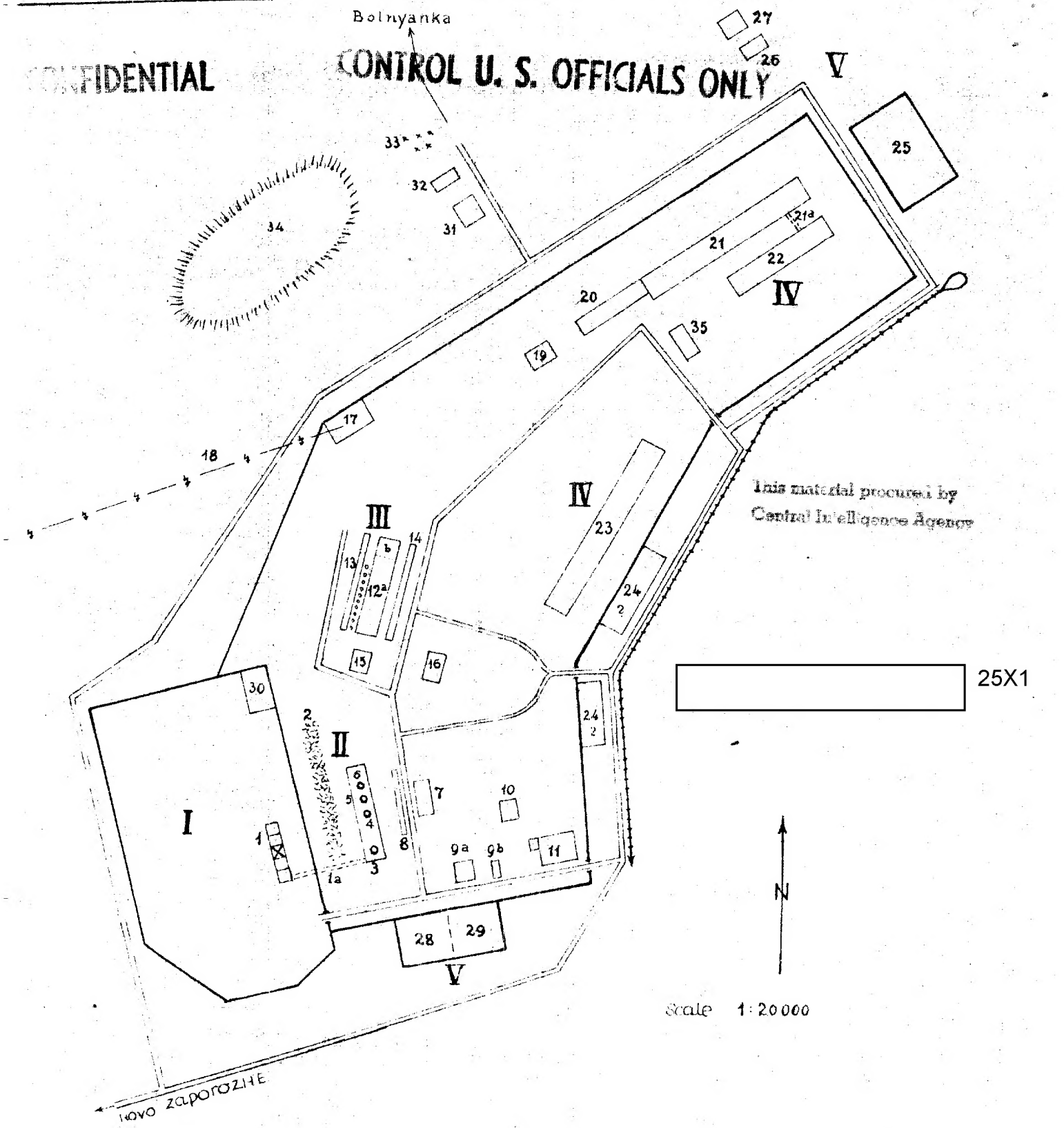
Annex 2 to

Zaporozhstal Iron and Steelworks in Zaporozhe



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Legend:

I. Coking plant and byproducts plant.

1. Four batteries with coking-coal tower and four smokestacks.

1a. Coke conveyor to the blast-furnace department.

II. Blast furnace department.

2. Ore storage dump.

3. Blast furnace No 1.

4,5 and 6. Blast furnaces No 2,3, and 4.

7. TEZ plant.

8. Switch and transformer station of the TEZ plant.

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9a and 9b. Pi

10. Forge, pr

11. Cooling-water basin with pumping station.

III. Steelworks.

12a. Open-hearth department equipped with 10 furnaces and 10 smokestacks.

12b. Two furnaces under construction.

13. Preparation shop.

14. Foundry and mold shop.

15. Mixing shop.

16. Special steel plant also known as the 30-ton department.

17. Main transformer station.

18. High-tension line to the power station at the storage dam.

IV. Rolling-mill department.

19. Ingot cooling-shop.

20. Annealing-furnace shop.

21. Hot-rolling mill.

21a. Underground connection to 22.

22. Cold-rolling mill.

23. Rolling mill, new construction project.

V. Secondary and auxiliary installations.

24. New construction projects outside the plant enclosure, which may be a new special steelworks.

25. Remontny Mekhanicheski Zavod (Mechanical Repair Plant)

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Annex 2

26. Slag-stone factory.

27. Fireclay factory.

28. Yuzh, electrical repair shop.

29. San Tekh, (Installationswerk).

30. PW Camp 7100/4.

31. PW Camp 7100/3.

32. Hospital.

33. Cemetery.

34. Slag dump.

35. Main administration building.

Plant fencing ————————

Plant roads ——————————

Streetcar line with terminal station +-+-+-+-+-+-+-o

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